

REMARKS

Claims 1-4, 6-7, 9-18, 30-36, 40-41 and 43-44 are pending in the present application. The Amendment under 37 C.F.R. § 1.111 filed on April 14, 2000, as well as the Office Action dated January 14, 2000, indicating that claim 30 was not pending was in error. Applicants respectfully request that the Examiner acknowledge the pending claims as 1-4, 6-7, 9-18, 30-36, 40-41 and 43-44.

Claims 2, 10-11, 14-16, 30, 32, and 36 are amended herein. Claim 2 is amended to correct a typographical error. Claims 10-11, 14-16, are amended to conform with the language of the base claim 1. Specifically, the phrase "raffinose synthase gene" is replaced with "isolated nucleic acid," which is the phrase recited in claim 1. Thus, claims 10-11, 14-16 now properly draw dependency to base claim 1. Finally, claims 30, 32, and 36 are amended into independent form.

No new matter is inserted into the application. A marked-up copy of the claims is attached hereto to show the changes made by this Amendment. Further, a copy of all pending claims is attached hereto pursuant to a request made by the Examiner.

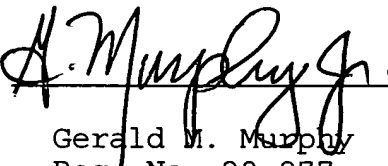
If the Examiner has any questions regarding the above, he is respectfully requested to contact Kristi L. Rupert, Ph.D. (Reg. No. 45,702) at the law offices of Birch, Stewart, Kolasch, & Birch, LLP, telephone number 703-205-8000.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claim 2. (Twice Amended) The isolated nucleic acid according to claim 1, wherein the plant is a dicotyledon [dicot[yledon]].

Claim 10. (Amended) The isolated nucleic acid [raffinose synthase gene] according to claim 2, wherein the dicotyledon is a lamiaceous plant.

Claim 11. (Amended) The isolated nucleic acid [raffinose synthase gene] according to claim 10, wherein the lamiaceous plant is Japanese artichoke.

Claim 14. (Amended) The isolated nucleic acid [raffinose synthase gene] according to claim 1, wherein the plant is a monocotyledon.

Claim 15. (Amended) The isolated nucleic acid [raffinose synthase gene] according to claim 14, wherein the monocotyledon is a gramineous plant.

Claim 16. (Amended) The isolated nucleic acid [raffinose synthase gene] according to claim 15, wherein the gramineous plant is corn.

Claim 30. (Twice Amended) A chimera gene comprising:
a nucleic acid isolated from a plant comprising a nucleotide sequence coding for an amino acid sequence of a protein capable of producing raffinose by combining a D-galactosyl group through an $\alpha(1\rightarrow6)$ bond with a hydroxyl group attached to the carbon atom at position 6 of a D-glucose residue in a sucrose molecule [the raffinose synthase gene of claim 1], and a promoter linked thereto.

Claim 32. (Twice Amended) A plasmid comprising a nucleic acid isolated from a plant comprising a nucleotide sequence coding for an amino acid sequence of a protein capable of producing raffinose by combining a D-galactosyl group through an $\alpha(1\rightarrow6)$ bond with a hydroxyl group attached to the carbon atom at position 6 of a D-glucose residue in a sucrose molecule [the raffinose synthase gene of claim 1]..

Claim 36. (Twice Amended) A method for metabolic modification, which comprises introducing a nucleic acid isolated from a plant comprising a nucleotide sequence coding for an amino acid sequence of a protein capable of producing raffinose by combining a D-galactosyl group through an $\alpha(1\rightarrow6)$ bond with a hydroxyl group attached to the carbon atom at position 6 of a D-

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glucose residue in a sucrose molecule [the raffinose synthase gene of claim 1] into a host organism or a cell thereof, so that the content of raffinose family oligosaccharides in the host organism or the cell thereof is changed.